



Western
Drought
Coordination
Council

1997-1998 Statement of Accomplishments

Report from the Steering Group
and the Four Working Groups

June 1998

WESTERN DROUGHT COORDINATION COUNCIL STATEMENT OF ACCOMPLISHMENTS, 1997-1998 REPORT

June 1998

Albuquerque, New Mexico

*Reporting on the 1997-1998 Accomplishments of the four Working Groups:
Preparedness and Mitigation; Response; Monitoring, Assessment and Prediction;
and Communications*

Executive Summary

Background

Created in 1997 through an interagency Memorandum of Understanding, the Western Drought Coordination Council (WDCC) was formed to establish a comprehensive, integrated and expeditious response to drought emergencies in the West. U.S. Department of Agriculture Deputy Secretary Richard Rominger and New Mexico Governor Gary Johnson served as the Council Co-chairs during the reporting period. The Council is comprised of the Secretaries of Interior, Commerce and Agriculture; the Administrators of the Federal Emergency Management Agency and the Small Business Administration; Tribal Representatives of the Chickasaw Nation, Apache Tribes and Belknap Community Council; the Governors of New Mexico, Texas and Colorado; and a representative from the National Association of Counties.

The work of the Council is carried out by a Steering Group and four Working Groups. The Steering Group is comprised of representatives of the Council members and the Co-Chairs of the Working Groups. The Working Groups are: Preparedness and Mitigation; Response; Monitoring, Assessment, and Prediction; and Communications. Each group is staffed by volunteers from federal, state, local and tribal associations. Federal and non-federal representatives co-chair each group. The National Drought Mitigation Center (NDMC) serves as the technical advisor to the Council and its Working Groups. The *1997/1998 WDCC Work Plan* provides additional information on the Council structure and activities. The plan is available on the Internet at the WDCC web site (<http://enso.unl.edu/wdcc>).

This Report

The Statement of Accomplishments is a report by the Steering Group to the Council members as directed in the *1997/1998 WDCC Work Plan*. It summarizes the accomplishments of the four Working Groups between June 1997 and June 1998. Each of the following chapters focus on an individual Working Group. The goals established for each of the Working Groups by the

Council in its *1997/1998 WDCC Work Plan* and the accomplishments and products developed by them over the year are identified. Many of the products are in final form and have either been provided to the Council and other participants directly or are identified as being available on the WDCC or other specified web sites. Some products and projects are continuous in nature, while others are still in development.

Major Accomplishments for 1997/1998

The initial year of the WDCC yielded many significant successes. The four Working Groups performed a number of tasks involving:

- ◆ data / product collection and surveying;
- ◆ review and analysis of data, plans, reports and other products;
- ◆ evaluation of information available and other data needed;
- ◆ direct and indirect assistance to people interested in drought management through interactive workshops, electronic access and published reports.

This work was carried out in a number of substantive areas related to drought management, including technical, scientific, planning, emergency response and communications fields. In addition, the work provides a solid foundation upon which to further address the needs of western states in mitigating drought impacts and will serve as a model for addressing and preparing for drought on a national level and by other regions of the country.

This first year's effort has been productive and poignantly underscores the need for continuation of the Council's mission, goals and objectives. Some specific products and accomplishments achieved this year are summarized below:

- ◆ The Preparedness and Mitigation Working Group developed *How to Reduce Drought Risk*, a step-by-step guide for planners to help identify and assess their vulnerability to drought. The guide is already being tested in several state and tribal planning efforts in the West.
- ◆ The Response Working Group's update of the *Catalog of Federal Assistance Programs* is a critical tool for states, tribes and local governments which will prove to be especially helpful to response personnel. It's existence on the WDCC web site will enable frequent updating as programs and information change.
- ◆ The Monitoring, Assessment and Prediction Working Group developed and published the *Western Climate and Water Status* report. These quarterly reports alert officials to potential drought

development and have proved to be a timely resource for response, planning, and preparedness for drought throughout the west.

- ◆ The on-going assistance and work of the Communications Working Group helped produce consistent, professional quality documents, presentations and other products. Their work to develop the WDCC web site responds to the need for timely and coherent communication about the problems and tools available for drought management.

Recognition of the Working Group Members and Support

The Steering Group would like to recognize the hard work of all the participants that made the first year of the WDCC such a success. The members of the Working Groups are essentially volunteers. The work accomplished by the members is typically supplemental to their regular workload as employees of various levels of government. The members and staff of each Working Group are committed, talented, and dedicated professionals. The products have been developed in a collaborative, interactive and integrated fashion, involving federal, state, local, tribal and other stakeholders who have an interest in drought management. Through sheer determination and collective spirit these members have spent endless hours, often on their own time, performing basic and advanced analytical, planning, evaluation, direct assistance and communications activities.

In addition, the Steering Group must acknowledge the contributions by the federal entities that have supported the activities of the council. The Department of Agriculture and the Federal Emergency Management Administration provided funding for the WDCC, the Department of Agriculture funded the NDMC, and the Bureau of Reclamation funded the Drought Mitigation Workshops and donated a full-time staff liaison position. This assistance has been critical. We would not have been able to accomplish as much as we did without that support.

Finally, the Steering Group would like to give a special thanks to the diligent work of the staff and Director Dr. Don Wilhite of the NDMC. Their technical expertise and perseverance have greatly eased the burden of the working groups. They have played an important role in the progress of the WDCC.

Chapter One: Preparedness and Mitigation Working Group

1997-1998 Accomplishments

Goal: Conduct Drought Mitigation and Planning Workshops

Help state, federal and tribal organizations gain awareness and skills in addressing drought contingency planning.

ACCOMPLISHMENTS:

- ◆ Assisted the NDMC in implementing the U.S. Bureau of Reclamation-sponsored and funded Drought Planning workshops.
 - ◇ Two of the four workshops in western states.
 - ◇ Workshops tailored to local concerns and needs.
 - ◇ Attendance averaging over 75 per location.
 - ◇ Workshop participation included representatives from federal, state, county, city governments; tribal organizations; River Basin Commissions; and local water utilities.
 - ◇ Other groups joined in co-sponsorship including the National Governors' Association (NGA), Western Governors' Association (WGA), Western States Water Council (WSWC), Utah Division of Comprehensive Energy Management, High Plains Climate Center, South Carolina Department of Natural Resources, Ohio River Basin Commission, and Southeast Regional Climate Center.

Goal: Review and Analyze Existing Drought Plans

Review existing / adopted drought response plans from local, state, federal and tribal agencies and associations to ascertain what information is necessary, what makes a plan successful, and what is similar and different in the plans. Share information for emulation by others.

ACCOMPLISHMENTS:

- ◆ Reviewed and compared 17 state and 11 local drought plans jointly with the NDMC; draft comparative matrix being made available through the WDCC web site; hard copies of the state comparison currently available through the NDMC.

- ◆ Analyzed statistical triggers for drought stages and corresponding responses; findings will be made available through the WDCC web site.

Goal: Inventory and Assess Mitigation Options

Compile recently applied drought mitigation options and assess short- and long-term effectiveness; note opportunities for improvements.

ACCOMPLISHMENTS:

- ◆ Helped participants in the Drought Planning Workshops assess existing mitigation options included in the 17 state and 11 local plans.

Goal: Identify a Model for Vulnerability Assessments

Identify the components necessary for successful vulnerability assessments and opportunities for application.

ACCOMPLISHMENTS:

- ◆ Developed and published the document *How to Reduce Drought Risk*, a practical step-by-step guide to assessing vulnerabilities to drought so that actions can be taken to reduce drought-related impacts before a drought occurs.
 - ◇ Incorporation of economic, environmental and social drought impacts in the guide.
 - ◇ Presentation of the guide occurred in the drought planning workshops; the guide is being used by the States of New Mexico and Arizona, and the Hopi Tribe.
 - ◇ Made the guide available through the WDCC web site.

Goal: Develop Information Clearinghouse

Provide an electronically accessible clearinghouse of drought monitoring, prediction, response, mitigation, preparedness, planning and public information.

ACCOMPLISHMENTS:

- ◆ Assisted in identifying web linkages for the NDMC-developed homepage with other drought information sources including WDCC, WGA, federal agencies.

Membership 1997-1998:

Lorayne Frank (Non-fed Co-chair)
Utah Division of Comprehensive
Emergency Management
Salt Lake City, UT

Mike Hayes
National Drought Mitigation Center
University of Nebraska
Lincoln, NE

Steve Jones
U.S. Bureau of Reclamation
Boulder City
Nevada

Cody Knutson
National Drought Mitigation Center
University of Nebraska
Lincoln, NE

Upmanu Lall
Utah State University
Logan, UT

Marty Moore
National Assoc. of Counties
St. Johns, AZ

Barry Norris
Oregon Water Resources Dept.
Salem, OR

Tom Phillips (Federal Co-chair)
U.S. Bureau of Reclamation
Washington, D.C.

Marco Rivera
Tohono O Odham Nation
Sells, AZ

John Rokich
Utah Div. of Comprehensive
Emergency Management
Salt Lake City, UT

Ann Seymour
Colorado Springs Utilities
Colorado Springs, CO

Steve Soberski
Natural Resources Comm.
Lincoln, NE

Beverly Suderman
The Hopi Tribe
Kykotsmovi, AZ

Tony Willardson
Western States Water Council
Midvale, UT

Chapter Two: Response Working Group

1997-1998 Accomplishments

Goal: Develop Catalog of Federal Assistance Programs

Develop and make available a catalog of federal assistance programs regarding drought responses.

ACCOMPLISHMENTS:

- ◆ Completed catalog which includes: general information, administering agency, form and availability of assistance, eligibility criteria, funding and points of contact.
 - ◇ Researched data and collected information about federal drought assistance programs.
 - ◇ Assisted in posting catalog on the WDCC web site.
 - ◇ Distributed hard copies of catalog for Council participants and Drought Contingency Workshop participants.

Goal: Review 1996 Drought Reports

Review 1996 WGA and FEMA drought reports.

ACCOMPLISHMENTS:

- ◆ Completed review of 1996 reports including status of issue resolution, lessons learned and issues to be resolved.
 - ◇ Findings are posted on the WDCC web site.

Goal: Survey Historical Drought Responses and Strategies

Collect historical data to be used in determining short-term drought impacts and response strategies.

ACCOMPLISHMENTS:

- ◆ Requests for data sent to 21 states, including all of the WGA states.
- ◆ Received responses from 14 states.
- ◆ Developing analytical approach.

Goal: Create a Reporting System for Drought Occurrences

Develop a system for states to report when drought occurs and identify unmet needs.

ACCOMPLISHMENTS:

- ◆ Developed the report design to include: timing of drought, opportunities for mutual aid and partnerships, and ways to facilitate response actions.
 - ◇ Identified evaluation of effectiveness of assistance to include post-drought assessment for each event.

Goal: Assist with Drought Contingency Planning Workshops

Provide information regarding response assistance activities and programs for the workshops.

ACCOMPLISHMENTS:

- ◆ Conducted presentations on Federal response programs at the two western locations of the U.S. Bureau of Reclamation funded Drought Contingency Workshops.
- ◆ Provided emergency response reference material for all workshops.

Membership 1997-1998

Albert Ashwood
Oklahoma Emergency Management
Oklahoma City, OK

Mark Bradford
U.S. Dept. of Interior
Bureau of Indian Affairs
Washington, D.C.

Leona Dittus (Fed. Co-chair)
U.S. Dept. of Agriculture
Farm Service Agency
Washington, D.C.

Dr. Charles Freeman
Oklahoma Dept. of Agriculture
Oklahoma City, OK

Michael Hand
U.S. Dept. of Agriculture
Risk Management Agency
Washington, D.C.

Fred May
Utah Comprehensive Emerg. Mgmt.
Salt Lake City, UT

Fred Sibley (Non-fed Co-chair)
Ofc. Of Emergency Management
Golden, CO

Jack Truby
321 Cook St.
Denver, CO

Leonard Boulas
Colorado Ofc. Of Emerg. Mgmt.
Golden, CO

Raymond Chatham
U.S. Small Business Admin.
Disaster Area 3 Office
Fort Worth, Texas

Mark Falcone
U.S. Dept. of Agriculture
Farm Service Agency
Washington, D.C.

Roseann Gonzales
Western Gov.s' Association
Denver, CO

Dave Kascht
U.S. Dept. of Agriculture
Natural Resource Conservation
Albuquerque, NM

Donnie Qunitana
New Mexico Economic Devlpmt
Santa Fe, NM

Col. Barry Stout
NMARNG
Santa Fe, NM

Ron White
New Mexico Dept. of Agricult.
Las Cruces, NM

Chapter Three Monitoring, Assessment, Prediction Working
Group
1997-1998 Accomplishments

(Monitoring)

Goal: Conduct a Census of Data Networks

Survey federal, state, local and private remote and in-situ hydro-meteorological data networks.

ACCOMPLISHMENTS:

- ◆ Conducted census from 17 western states including location, environmental variables measured, characteristics of the instrumentation, a comprehensive site history and other parameters.

Goal: Develop Historical Climate Database

Accumulate historical climatological databases for comparative analysis.

ACCOMPLISHMENTS:

- ◆ Combined census data including precipitation, snowpack, streamflow, reservoir storage and soil moisture networks.
- ◆ Posted historical data sets on the Internet at the Western Regional Climate Center; work to link to NDMC and WDCC web sites underway.

Goal: Link Networks

Transform data from single-purpose networks into a multi-purpose management tool.

ACCOMPLISHMENTS:

- ◆ Identified management opportunities to include regional management of renewable natural resources.
- ◆ Created Internet web site linkages to facilitate timely assimilation of diverse climatological information.
- ◆ Applied integrated information in the quarterly reports.

Goal: Distribute Climate-Related Information

Use the Unified Climate Access Network (UCAN) to distribute climate-related products.

ACCOMPLISHMENTS:

- ◆ Conducted UCAN demonstration in mid-March in Washington, D.C.; continuation of “proof of concept” work is underway; linked data from various current non-UCAN linked networks.

(Assessment)

Goal: Create Regional Drought Assessment Reports

Produce a quarterly report of regional drought conditions, *Western Climate and Water Status*, including a two-page summary for policy makers.

ACCOMPLISHMENTS:

- ◆ Created *Western Climate and Water Status Report*, issued October 1997, January 1998, April 1998.
- ◆ Prepared two-page summary briefing of current status; made available through the WDCC web site.
- ◆ Provided more detailed briefing including Internet links to additional supportive data; located through WDCC web site.
- ◆ Used census results to prepare the quarterly report
- ◆ Used the Palmer Drought Severity Index, Crop Moisture Index, and Standardized Precipitation Index in preparing the quarterly report.

Goal: Analyze Observed Data

Conduct analysis of available local, regional, and national meteorological and environmental data.

ACCOMPLISHMENTS:

- ◆ Initiated assessment of daily, weekly, monthly, seasonal, yearly and historical data anomalies based on mean, median and variance evaluation.
- ◆ Identified data availability and limitations regarding streamflow, reservoir, and divisional precipitation.

Goal: Evaluate Derived Data

Monitor use and usefulness of various precipitation indices to assess potential for drought.

ACCOMPLISHMENTS:

- ◆ Assessed the following: Palmer Drought Severity Index, Crop Moisture Index, Standardized Precipitation Index, Surface

- ◆ Water Supply Index, Crop Specific Indices, Leaf Area Indices (developed from NOAA's Advanced Very High Resolution Radiometer for Normalized Difference Vegetation Index).

Goal: Identify triggers for drought types

Gather information about nomenclature used in defining levels or severity of drought and triggering mechanisms between those levels.

ACCOMPLISHMENTS:

- ◆ Identified parameters of assessment to include: meteorological, agricultural and hydrological descriptions and consideration of appropriate indicators for assessing drought impacts.

(Prediction)

Goal: Monitor Weather and Climate Predictions

Monitor various weather and climate prediction information relevant to drought prediction for decision makers.

ACCOMPLISHMENTS:

- ◆ Monitored and interpreted monthly, seasonal, annual and interannual forecasts; summarized findings in the quarterly reports.

Goal: Verify Long-term Forecasts

Monitor and evaluate long-term forecasts for predicting droughts to determine their usefulness by decision makers.

ACCOMPLISHMENTS:

- ◆ Used some verified forecasts in preparing the quarterly reports.

Goal: Monitor drought prediction techniques

Monitoring of drought techniques and technologies for accuracy and applicability.

ACCOMPLISHMENTS:

- ◆ Examined the potential for the application of soil moisture, evaporation, atmospheric and global ocean circulation to support improved forecasting.

Membership 1997-1998

Robert Becker
Dept. of Water Resources
Fort Defiance, AZ

Ned Guttman
National Climatic Data Center
Asheville, N.C.

JAWF Representative (Shared)
Bob Stefanski / Brad Rippey
U.S. Dept. of Agriculture
Washington, D.C.

Jim Laver
Climate Prediction Center
Washington, D.C.

Tom McKee (Non-Fed Co-chair)
Colorado Climate Center
Colorado State University
Ft. Collins, CO

Peter Palmer
U.S. Bureau of Reclamation
Boise, ID

Randy Parker
U.S. Geological Survey
Denver, CO

Kelly Redmond
Western Regional Climate Ctr.
Reno, NV

Garry Schaefer (Federal Co-chair)
U.S. Dept. of Agriculture
Natural Resources Conservation Service
Portland, OR

Mark Svoboda
National Drought Mitigation Ctr.
University of Nebraska
Lincoln, NE

Rich Tinker
Climate Prediction Center
Washington, D.C.

Gregg Rishel
National Weather Service
Salt Lake City, UT

Chapter Four: Communications Working Group

1997-1998 Accomplishments

Goal: Organize a Press Release / Media Kit / Communications Catalog

Identify and gather existing press-oriented and other public related communications regarding drought events, planning and responses.

ACCOMPLISHMENTS:

- ◆ Prepared model public and media-oriented literature kit and communications catalog including sample press releases, public-version brochures, Public Service Announcements (PSAs), and other public outreach materials about drought response, sample assistance programs, planning approaches, assessment techniques and communications. Work is underway to make this information available in an interactive electronic format.

Goal: Develop Working Group Communication Strategy

Prepare a communications strategic plan to focus the Communications Working Group's assistance to the Council, Steering Group and other Working Groups.

ACCOMPLISHMENTS:

- ◆ Completed a Strategic Plan including goals, objectives and mechanisms for providing communications assistance and anticipated communications products.

Goal: Provide a Forum for Feedback and Evaluation

Develop and implement a checklist to assist other Working Groups and the Council in developing communication products and services.

ACCOMPLISHMENTS:

- ◆ Created a communications checklist which identifies target audience, purpose, key messages, time sensitivity of communication, format and other design criteria.

Goal: Provide an Active Communication Outreach Service for the Council

Assist Steering Group in developing a Communications protocol for assignment, review and release of communications from the WDCC and its entities. Work with the Mitigation and Preparedness, Response, Monitoring, Assessment and Prediction Working Groups to provide communications assistance and services

ACCOMPLISHMENTS:

- ◆ Protocol completed and implemented.
- ◆ Provided editing and Internet availability assistance for the *Catalog of Federal Assistance Programs*.
- ◆ Assisted in the editing of the quarterly *Western Climate and Water Status* reports and in making them available on the Internet.
- ◆ Conducted presentations on public participation activities, and successful stakeholder involvement techniques at two of the western locations of the U.S. Bureau of Reclamation-funded Drought Planning Workshops.
- ◆ Provided published reference materials for the Drought Planning workshops.
- ◆ Facilitated preparation of the *1997/1998 Statement of Accomplishments* report and presentation to the Council.

Goal: Facilitate Exchange and Dissemination of Drought-related Information

Provide a WDCC web site, link it with the existing NDMC and WGA web sites, and other related sites.

ACCOMPLISHMENTS:

- ◆ Established the WDCC web site and provided linkage to NDMC

Goal: Expand membership

Solicit new members to assure wider representation among government organizations, tribes and other stakeholders.

ACCOMPLISHMENTS:

- ◆ Met targets for membership and expanded representation.

Membership 1997-1998

Terry Canup
Dept. of Agricultural Communications
University of New Mexico
Las Cruces, NM

Alice Darilek
Water Conservation Program
New Mexico State Eng. Ofc.
Santa Fe, NM

Karen Deike
Western Governors' Association
Denver, CO

Ane Deister (Non-fed Co-chair)
Metropolitan Water District
Los Angeles, CA

FEMA Region 6 Rep. (shared)
Wayne Fairley / Charles Barnes
Denton, TX

Mary Helen Follingstad
Interstate Stream Commission
Santa Fe, NM

Liz Gardner
Denver Water
Denver, CO

Tom Gentle
Oregon State University
Corvallis, OR

Paul McCawley (Fed Co-chair)
U.S. Dept. of Agriculture (Env. Ed.)
Washington, D.C.

Arlene Post
Las Virgenes Mun. Water Dist.
Calabasas, CA

Elaine Simonson
U.S. Bureau of Reclamation
Denver, CO

Kelly Smith
National Drought Mitigation Ctr.
Lincoln, NE

Marilu Trainor
NOAA - National Weather Service
Salt Lake City, UT